



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0701; Directorate Identifier 2014-CE-025-AD]

RIN 2120-AA64

Airworthiness Directives; Various de Havilland Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for all Harry E. Williams de Havilland Model DH 82A airplanes, all Cliff Robertson de Havilland Model DH 82A airplanes, and all de Havilland Model DH 83 airplanes. This proposed AD was prompted by reports of structural failure of the attachment of the wing to the fuselage that resulted from failed lateral fuselage tie rods. This proposed AD would require inspecting the aircraft maintenance records to determine the date of installation or the date of last replacement of the lateral fuselage tie rods. This proposed AD would also require repetitively replacing all lateral fuselage tie rods and attaching nuts at a specified life limit interval. We are proposing this AD to correct the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, for de Havilland DH 82A airplanes, contact de Havilland Support Ltd., Building 213, Duxford Airfield, Cambridge, United Kingdom CB22 4QR, telephone: +44 (0) 1223 830090; fax: +44 (0) 1223 83008; email: info@dhsupport.com, Internet: <http://www.dhsupport.com/moth.php>.

For service information identified in this proposed AD, for de Havilland DH 83 airplanes, contact Air Stratus Ltd., Oaksey Park Airfield, Oaksey, Malmesbury, Wiltshire, United Kingdom SN 16 9SD, telephone: +44 (0) 1666 575111; no known Internet address.

You may view this referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64016. For information on the availability of this material at the FAA, call (816) 329-4148.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0701; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT:

For airplanes covered under Type Certificate Data Sheet (TCDS) A5PC (Model de Havilland DH 82A airplanes built in Australia): Andrew McAnaul, Aerospace Engineer, FAA, Fort Worth Airplane Certification Office, ASW-150 (c/o San Antonio MIDO), 10100 Reunion Place, Suite 650, San Antonio, Texas 78216; phone: (210) 308-3365; fax: (210) 308-3370; email: andrew.mcanaul@faa.gov.

For airplanes covered under TCDS A8EU (Model de Havilland DH 82A airplanes built in the United Kingdom): Fred Guerin, Aerospace Engineer, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Blvd., Suite 100, Lakewood, California 90712; phone (562) 627-5232; fax: (562) 627-5210; email: fred.guerin@faa.gov.

For airplanes covered under TCDS 2-439 (Model de Havilland DH 83 airplanes built in the United Kingdom): Karl Schletzbaum, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; phone: (816) 329-4123; fax: (816) 329-4090; email: karl.schletzbaum@faa.gov.

SUPPLEMENTARY INFORMATION:**Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the **ADDRESSES** section. Include “Docket No. FAA-2014-0701; Directorate Identifier 2014-CE-025-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

During routine maintenance on a de Havilland Model DH 82 airplane, it was found that the lateral fuselage tie rod at the aft position had sheared at its location with the spar attachment fitting. Investigation revealed that the failure was a result of fatigue cracking in the thread root. In addition, the forward tie rod (which had not fractured) was distorted and found to have been manufactured from material of incorrect specification with a lower tensile strength.

During our review of the above-referenced cracking and the related mandatory service information, we determined that the life limit on the lateral fuselage tie rods is not currently addressed for airplanes on the U.S. registry. Mandatory service information is required for airplanes on the registry in certain other countries, but in the United States an AD must be issued to require the actions of a service bulletin for all airplanes.

De Havilland Model DH 82A airplanes (commonly referred to as Tiger Moths) are type certificated under two type certificates. TCDS A5PC, currently held by Harry E. Williams, is for airplanes built in Australia, and TCDS A8EU, currently held by Cliff Robertson, c/o Gadbois Business Management, is for airplanes built in the United Kingdom. This type certification approval was not by validation, but by an acceptance process; as such, the U.S. type certificate holders are not the manufacturers of the airplanes and the original manufacturers (de Havilland and its licensees) are not type certificate holders.

De Havilland Support Ltd (DHSL) holds the type certificate responsibility for de Havilland Model DH 82A airplanes (the type design for TCDS A8EU) in the United Kingdom.

DHSL is custodian of the airframe design data, manufacturing drawings, and repair schemes still in existence for de Havilland Model DH 82A Tiger Moth series airplanes only. In 2012, DHSL entered into a CAA Type Responsibility Agreement (TRA) so that the airplane remains eligible, if required, for an ICAO-compliant Certificate of Airworthiness to facilitate training and pleasure flying.

Similarly, Air Stratus Ltd holds the type certificate responsibility for de Havilland Model DH 83 airplanes (the type design for TCDS 2-439) in the United Kingdom.

This condition, if not corrected, could result in structural failure of the attachment of the wing to the fuselage. We are issuing this proposed AD to correct the unsafe condition on these products.

Relevant Service Information

We reviewed British Aerospace Military Aircraft and Aerostructures BAe Aircraft Bulletin for de Havilland Moth Aircraft, Document Type and Ref No Technical News Sheet CT (Moth) No 29, Issue 3, dated March 1, 1999, which was approved by the Civil Aviation Authority (CAA) for the United Kingdom to ensure the continued airworthiness of these airplanes in the United Kingdom. The service information introduces a life limit for the lateral fuselage tie rods and describes procedures for repetitively replacing the lateral fuselage tie rods and attaching nuts.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require accomplishing the actions specified in the service information described previously.

Costs of Compliance

We estimate that this proposed AD would affect 69 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspect the aircraft maintenance records to determine the date of installation or date of last replacement of the lateral fuselage tie rods and attaching nuts	1 work-hour X \$85 per hour = \$85	Not applicable	\$85	\$5,865

We estimate the following costs to the necessary replacements.

Estimated costs

Action	Labor cost	Parts cost	Cost per product
Replace lateral fuselage tie rods and attaching nuts	30 work-hours X \$85 per hour = \$2,550	\$825	\$3,375

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds

necessary for safety in air commerce. This proposed regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

Harry E. Williams, Cliff Robertson, and de Havilland Airplanes: Docket No. FAA-2014-0701; Directorate Identifier 2019-CE-019-AD.

(a) Comments Due Date

We must receive comments by **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Harry E. Williams and Cliff Robertson Model de Havilland DH 82A airplanes, all serial numbers, and de Havilland Model DH 83 airplanes, all serial numbers, certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 5341, Fuselage, Wing Attach Fittings.

(e) Unsafe Condition

This AD was prompted by reports of structural failure of the attachment of the wing to the fuselage that resulted from failed lateral fuselage tie rods. We are issuing this AD to correct the unsafe condition on these products.

(f) Compliance

Comply with this AD within the compliance times specified in paragraphs (g) through (h) of this AD, unless already done.

(g) Determine Date of Installation or Date of Last Replacement of the Lateral Fuselage Tie Rods and Attaching Nuts

Within the next 30 days after the effective date of this AD, review the aircraft records to determine the date of installation or date of last replacement of the lateral fuselage tie rods and attaching nuts.

(h) Replace the Lateral Fuselage Tie Rod and Attaching Nuts

Initially replace the lateral fuselage tie rod and attaching nuts at whichever of the compliance times specified in paragraph (h)(1) or paragraph (h)(2) of this AD that applies. Repetitively thereafter replace the lateral fuselage tie rod and attaching nuts every 2,000 hours TIS or 18 years, whichever occurs first. Do the replacement following the procedures in paragraph 2.C. of the Accomplishment Instructions and the table on Figure 1 in British Aerospace Military Aircraft and Aerostructures BAe Aircraft Bulletin for De Havilland Moth Aircraft, Document Type and Ref No Technical News Sheet CT (Moth) No 29, Issue 3, dated March 1, 1999.

(1) If the date of lateral fuselage tie rod installation or date of last replacement is known: Do the initial replacement at whichever of the following compliance times in paragraph (h)(1)(i) or paragraph (h)(1)(ii) of this AD that occurs later:

(i) Upon accumulating 2,000 hours TIS on the lateral fuselage tie rod or upon reaching 18 years from the last lateral fuselage tie rod replacement, whichever occurs first; or

(ii) Within the next 6 months after the effective date of this AD or within the next 100 hours TIS after the effective date of this AD, whichever occurs first.

(2) If the date of lateral fuselage tie rod installation or date of last replacement is not known: Do the initial replacement within the next 6 months after the effective date of this AD or within the next 100 hours TIS after the effective date of this AD, whichever occurs first.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager of the Fort Worth Airplane Certification Office (ACO), the Manager of the Los Angeles Aircraft Certification Office (ACO), and the Manager of the Standards Office, FAA, have the authority to approve AMOCs for their respective products covered by this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the applicable FAA office, send it to the attention of the person identified in paragraphs (j)(1), (j)(2), or (j)(3), as applicable.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

(1) For more information about this AD for airplanes covered under Type Certificate Data Sheet (TCDS) A5PC (Model de Havilland DH 82A airplanes built in Australia), contact Andrew McAnaul, Aerospace Engineer, FAA, Fort Worth ACO, ASW-150 (c/o San Antonio MIDO), 10100 Reunion Place, Suite 650, San Antonio, Texas 78216; phone: (210) 308-3365; fax: (210) 308-3370; email: andrew.mcanaul@faa.gov.

(2) For more information about this AD for airplanes covered under TCDS A8EU (Model de Havilland DH 82A airplanes built in the United Kingdom), contact Fred Guerin, Aerospace Engineer, FAA, Los Angeles ACO, 3960 Paramount Blvd., Suite 100, Lakewood, California 90712; phone (562) 627-5232; fax: (562) 627-5210; email: fred.guerin@faa.gov.

(3) For more information about this AD for airplanes covered under TCDS 2-439 (Model de Havilland DH 83 airplanes built in the United Kingdom), contact Karl Schletzbaum, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4123; fax: (816) 329-4090; email: karl.schletzbaum@faa.gov.

(4) For British Aerospace Military Aircraft and Aerostructures BAe Aircraft Bulletin for De Havilland Moth Aircraft, Technical New Sheet CT (Moth) No 29, Issue 3, dated March 1, 1999, service information identified in this AD, contact:

(i) For de Havilland DH 82A airplanes: de Havilland Support Ltd, Building 213, Duxford Airfield, Cambridge, United Kingdom CB22 4QR, telephone: +44 (0) 1223 830090; fax: +44 (0) 1223 83008; email: info@dhsupport.com, Internet: <http://www.dhsupport.com/moth.php>.

(ii) For de Havilland DH 83 airplanes: Air Stratus Ltd., Oaksey Park Airfield, Oaksey, Malmesbury, Wiltshire, United Kingdom SN 16 9SD, telephone: +44 (0) 1666 575111; no known Internet address.

(5) You may view this service information at FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64016. For information on the availability of this material at the FAA, call (816) 329-4148.

Issued in Kansas City, Missouri, on September 8, 2014.

Earl Lawrence,
Manager, Small Airplane Directorate,
Aircraft Certification Service.

BILLING CODE 4910-13-P

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